

AMERICAN BEE JOURNAL



DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY PRODUCERS



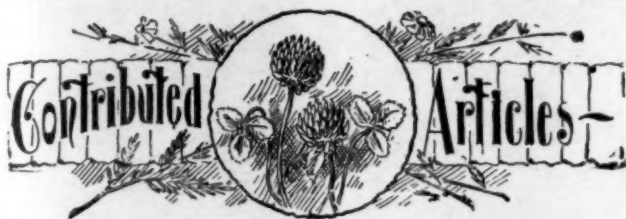
Published Weekly at 118 Michigan Street.

\$1.00 a Year—Sample Copy Free.

37th Year.

CHICAGO, ILL., MAY 20, 1897.

No. 20.



Winter-Case Arrangement for Bees.

BY PERCY O. ORTON.

I forward to-day illustrations of a winter-case which I made and am using. It works to perfection. It is 13 feet long, $2\frac{1}{2}$ feet wide, and $2\frac{1}{2}$ feet deep, and holds 10 two-super Dovetailed hives (8 frames each). The hives stand one inch apart in the case; the entrance is $7\frac{1}{16} \times 12$ inches, and enters a space in the case $1\frac{1}{2} \times 2 \times 14$ inches. A block $1 \times 1\frac{1}{2} \times 2$ inches is placed between each hive at the entrance, and a strip $\frac{1}{2} \times 2$ inches by 13 feet is nailed to the top of these blocks, forming the compartment $1\frac{1}{2} \times 2 \times 14$ inches;

"Artificial" Increase, or Dividing Colonies.

BY G. M. DOOLITTLE.

A mania seems to have seized many of those keeping bees, for increase of colonies otherwise than by natural swarming, if my correspondence is any criterion to go by, for, at no time in my bee-keeping life, have I had so many enquiries in this matter as during the past three months; therefore, to save so much private correspondence I will give some of the plans which I use successfully, in the American Bee Journal, even though it may be, to quite a large extent, matter which I have given before. But before doing so, I wish to say, that for this locality, I prefer natural swarming to any plan of artificial increase, where only one swarm is allowed from each old colony, and where said swarm will issue in time to prepare both old and new colonies in good condition for the honey harvest.

The first plan I will give for artificial increase is what is termed by some as the "nucleus plan." To be of the most value, the nucleus should be forced 18 or 20 days before the honey-harvest, by having enough bees in it to protect a frame two-thirds full of brood, the larger part of which should hatch during the first four or five days, while said comb should contain some eggs just laid, if possible. Besides this frame of

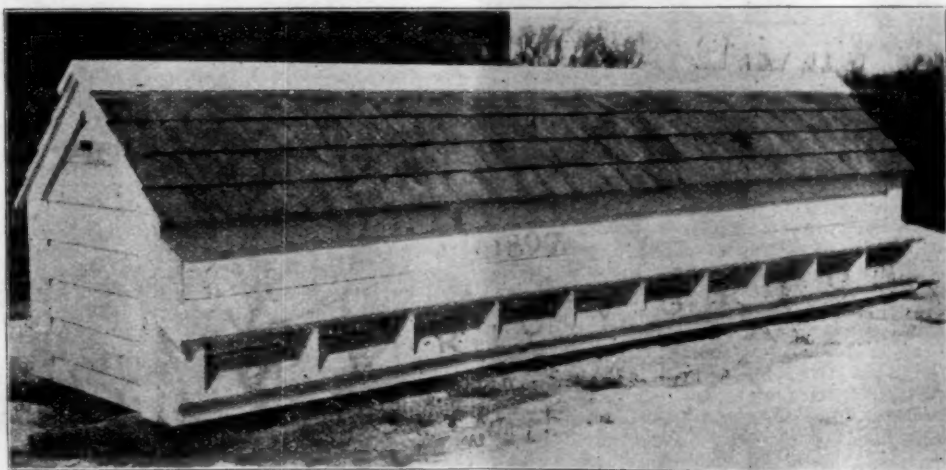


Fig. 1—Front View of the Orton Winter-Case Arrangement.

and into each of these 10 a hive is slt, making the hive-entrance on a direct line with the outside entrance, through the case.

Chaff or any suitable packing is used. The roof is hinged, and is raised up and held by two sticks. A lock is used on the opposite side of the case to lock the roof down, which does away with any one meddling with the honey or bees. The cost of this arrangement is about \$3.50, and will give many bee-keepers an idea for a good home-made winter-case. The entrances to the hive are covered, and bee-tight. The floor to the portico has the same slant as the roof. Dead bees and water fall away from the entrance. Fulton Co., N. Y.

brood and bees, the nucleus should contain a frame having a pound or two of honey in it, the whole being set in a hive and confined to one side of the same by means of a division-board.

The next day after making, a nearly-mature queen-cell should be given, or newly-hatched queen introduced. In about 10 days, if all proves favorable, the young queen will be laying, when I go to the hive from which I formed the nucleus and select a frame of brood, nearly all of which are gnawing out of the cells, and add this to the nucleus, always putting a frame of comb or comb foundation into the old colony to take the place of the one taken out, otherwise too much drone-comb would be built; for colonies that are allowed to build

comb under these conditions nearly always build drone-comb.

I now wait four or five days, when I go to the old colony and take out four frames of brood, from which all the bees were shaken, as they were from the last-mentioned frame, when I carry them to the nucleus. I now fill out each hive with empty comb or comb foundation, and put on the surplus arrangement.

By the above, each colony is made of about equal strength, and the brood is so taken out of the old hive that the colony does not have a desire to swarm. The old colony will have the most field bees for the first week or so, but the other will soon make the stronger colony of the two.

My second plan is to make one colony from each old one, on the principle of division of bees instead of division of brood, as in the above case. In using this plan we must have queen-cells nearly mature by the time our first colonies are preparing to swarm. Having such cells on hand, I go to a colony preparing to swarm, or one that has its hive full of bees and brood, and move it one side of the old location, so as to put a new hive in its place. If a hive is not full of brood and bees, do not touch it; for it is useless to try to increase bees till such is the case.

I now look over the combs till I find the one having the queen on it, when I place that comb in the new hive. I next give them a frame having some honey in it, and then fill out the hive with empty comb or foundation, when about two-thirds of the bees in the old hive are shaken in front of the new hive and allowed to run in. After this I arrange the frames back in the old hive, putting a division-board in place

pared hive in its place. Thus I have a laying queen and enough of her own bees to protect her, together with a hive filled with combs of brood, and all the field-bees from the removed colony. The loss of bees to the removed colony stops the swarming impulse, and in about a week they have so regained their loss that they are ready for the sections again.

In this way I make one colony from two old ones, but have all in the best possible condition to take advantage of the honey harvest which is soon upon us.

These plans all look toward a host of bees in time for the harvest, with no desire to swarm; and thus having them gives an assurance of a large crop of honey.

Onondaga Co., N. Y.



"Digested" (?) Nectar and Glucose—A Protest.

BY EMERSON TAYLOR ABBOTT.

I desire to offer a mild protest as to some of the positions taken by Prof. Cook in his article on page 179. He says, in speaking of the glucose of digestion, that it is "transformed cane-sugar or starch, acted upon by the animal juices of the intestines" (note the language); and that "honey is probably the same, as the bees gather the cane-sugar from the flowers and transmute it by a digestive (?) process into the wholesome and delicious honey."

I want to say that honey is "probably" not "the same" as the glucose produced by the "juices of the intestines." At

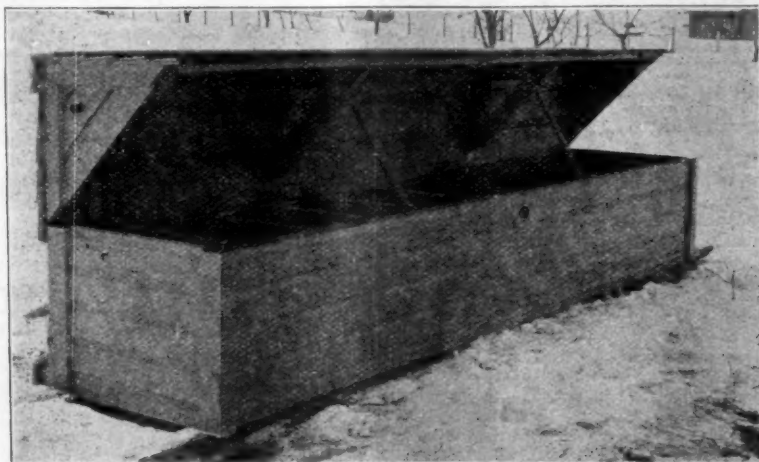


Fig. 2—Rear View of the Orton Winter-Case Arrangement.

of the frames taken out, when the old hive is carried to a new location where I wish it to remain. After the bees thus removed have become reconciled to their queenless condition, I give them one of the nearly-mature cells, or a virgin queen which will soon be laying. In this way I have secured my new swarm, controlled all after-swarming, and introduced my young queen, all to my liking, and with but little trouble.

My third plan is one which I use on the weaker colonies, or those which do not get ready to swarm up to 10 days or so before the honey harvest arrives, when I proceed to make colonies from them as follows:

A hive is filled with frames of empty comb, and placed upon the stand of one of these colonies which have not swarmed, and all the sections are taken off and placed thereon, then all the bees are shaken and brushed off their combs of brood and honey in front of the hive, into which they will run as fast as shaken off. Thus I have a colony that is ready for the honey harvest, as they have the queen, bees, and partly-filled sections all in readiness to work. Previous to this, nuclei have been started, so I have plenty of laying queens to use as I need them.

I next take all the combs of brood from which the bees were brushed except one, arranging them in the hive the bees were shaken out of, and carry them to the stand of another colony which has not swarmed. I next take the comb of brood which was left out, go to one of the nuclei, take out the frame having the laying queen on it, and put the frame of brood in its place. Take the frame—bees, queen and all—and set it in the place left vacant for it when arranging the combs of brood. I now put on the sections, and, having all complete, I move the colony to a new stand and set the pre-

least there are a large number of us who think it is not, and up to the present time we have failed to find any convincing proof that our opinions are not correct. In the first place, we insist that honey as found in the combs has never come in contact with any "juices secreted by the intestines," as we commonly think of digestion. We are well aware that it passes through a transformation after it is gathered by the bees and before it is known as honey, but that is not necessarily a "digestive process," as plain, common people would define digestion. So far as I am concerned personally, I think the process of producing honey out of nectar bears more resemblance to that of producing commercial glucose out of corn than it does to the process of digestion as it takes place in the intestines. I especially protest against conveying the idea that honey has ever been in the "intestines" of a bee. One may just as well say that corn taken from a chicken's crop had been in its intestines—a statement which anyone would recognize as being far from scientifically correct.

Honey is transformed nectar, but I prefer to think of the process as being chemical, rather than the result of the vital energies of an animal organism.

Then the Professor would have us believe that commercial glucose is a very unwholesome food, if not really poisonous. He says bees seem to "know that it is an unwholesome food, and thus only take it as a matter of necessity." Do bees know anything about its "unwholesomeness," or do they refuse to take it because it is deficient in saccharine matter? If they know so much about glucose, why will they suck poisoned nectar from a fruit-tree?

"If glucose will kill bees, it stands to reason that it is very probably deleterious to all animals." I am not so sure that

glucose will kill bees, but it does not follow that it is "deleterious to all animals," if it will. Too much salt will kill chickens, but it is beneficial, if not absolutely necessary, to some animals.

I, for one, do not think the honey industry will gain anything by beginning a fight against glucose as such. I do not think it is necessarily an unmitigated evil, and I am not alone in this opinion. One of the leading chemists of the United States uses the following language with regard to it:

"In regard to wholesomeness, also, it is not possible to condemn glucose. When properly made it is apparently as wholesome an article of diet as cane-sugar. In fact, the starches which are consumed in our foods are all converted into glucose during the process of digestion. A glucose food, therefore, is a starch food already partially digested. . . . At the present time the use of glucose in the manufacture of molasses and syrups cannot be said to be a fraud, from a financial point of view, inasmuch as the glucose costs quite as much as the other materials of which the molasses and syrups are made."

Another chemist in the employ of the Government says:

"I consider that it is difficult to find in the market a sample of pure molasses such as could have been obtained some years since. If it is not adulterated with glucose syrup, it has been treated with chemicals in order to lighten its color. This latter method is quite as much an adulteration as the former, and it is, in my opinion, to be protested against much more than the use of glucose syrup. There is nothing deleterious in glucose, and its object is simply to make a syrup not only pleasing to the eye, but more pleasant, in the opinion of many, to the taste."

With such statements to contend with, I think that if we undertake to banish glucose from the land, we will find, to use a slang saying, that we have "bit off more than we can chew." As between the cane-sugar of the stores and a fine quality of commercial glucose, I should take the glucose, if I had nothing in mind but the wholesomeness of the two articles.

It does not follow, however, that any man has a right to mix glucose with cane syrup and sell the product for a fine quality of "Orleans molasses," or mix it with honey and call the entire mass "clover honey." This is a *fraud*, and should put every man behind the bars who does it. Let us insist that all food products be sold for *what they are*; and beyond this, it seems to me, we have no right to go. Buchanan Co., Mo.



Hive-Entrances in Winter—Sweet Clover, Etc.

BY E. B. TYRRELL.

Being a reader of the American Bee Journal, and believing it to reach the hands of many beginners who, like myself, are stumbling through the hardest and darkest part of bee-culture—the beginning—I desire to give them a few kinks which I have learned through five years of blunders and study.

In the copy of the American Bee Journal lying before me, I notice a question from N. English, Iowa, in which is asked if it would not be policy to shut bees in the hive in winter during sunny days, when it is too cool for bees to fly; to which Dr. Miller answers "No."

Now while it perhaps is not policy to close the hive-entrance with sticks or such like, yet I have found that it is certainly a benefit to shade the hive, entrance and all, by piling straw around it. To explain more fully, let me give my method of wintering:

In the fall I see that my bees are well supplied with honey, after which I place a super on the hive and fill it with chaff, placing a piece of cloth between the chaff and the brood-nest. Now they are left thus until snow flies and zero weather comes, after which I pile a little straw around the hives and cover them completely with snow. This is left until the cold snap passes—"it usually lasts about a week"—when the straw and snow is taken from the entrance *only*. Now after this straw is shaken out so as to clear it from snow, and the entrance is cleared, the straw is placed back, and left all the while until such time as I know it is warm enough for the bees to fly. By this method I lose no bees except from starvation, and they are in healthy condition in the spring.

A LITTLE SWEET CLOVER EXPERIENCE.

Ever since I can remember sweet clover has grown on the four corners of the road where I live. During this time I have had ample time to study it, but it has not been until the last two or three years that I have paid special attention to it. At the present writing there is quite a little of it around, as a result of some seed-sowing done by me last spring, one year

ago. As yet the only fault I can find with it being on our roadsides is its rank growth; still I believe it is better than the ragweed which it crowds out.

In sowing it along the roads, I find that it grows best when sown very early in the spring, before it commences to freeze and thaw, and sowing it just where the grass leaves off and the ragweed commences to grow next to the tracks; then when it breaks up, the seed will be buried by the teams driving along on the side of the road.

Last year I commenced feeding some to my hogs as an experiment. At first they would hardly touch it, but I kept throwing it into the pen every day, and next I would find the stalks with the leaves stripped off, and finally I could find nothing left in a short time after feeding it. They were well fed with other feed at the same time.

As to its spreading, I have only to say that a neighbor was working a farm joining us, and one little piece (a garden spot) got thickly seeded to sweet clover from the road. The first year the garden was not weeded very well, and the clover got a good start. The next spring it was on hand, bright and early, but the man plowed this piece for corn. At this time the clover was at least one foot high. He gave this corn ordinary cultivation, and every stalk of sweet clover was killed out.

SOME HINTS FOR BEGINNERS.

A few things I believe a beginner should remember—

1st. To handle frames and hives of bees as though they were eggs.

2nd. Not every bee that flies in your face will sting you.

3rd. Never think of defeat. When starting in bee-keeping, remember the most trying time is at first; and when handling frames of bees, never back out or flinch if they do act a little cross. Always accomplish what you commence.

4th. Never get mad when working with bees, even if they do sting you.

5th. Never bundle up your hands. I have received more stings by bundling up my hands so they were clumsy, than I ever could have received barehanded.

6th. When you are handling bees, never let a bee-sting unnerve you; but work just as carefully as though nothing had happened.

7th. Don't believe all you read or hear until first proving it.

8th. Do some reasoning of your own; and don't follow others simply because *they do it*. What suits some one else may not suit you. Ogemaw Co., Mich.



Adulteration of Honey in California, Etc.

BY PROF. A. J. COOK.

California bee-keepers are very pleased over their new anti-adulteration law. We owe this law—which perhaps is as excellent as such a law can be made—to the wisdom and energy of Mr. Clayton, who spent a good deal of time in perfecting this measure. He is an able man, and made it as good as he could himself. He then secured the services of a number of others to help him in perfecting the measure. Those who know Mr. Clayton, need not be told that he was in time, so that he had his Bill ready at the opening of the Legislature. Thus it was, that his Bill was one of the first—I think the very first measure—that passed. Indeed it was so well managed and its passage so prompt that those who are interested in the nefarious work of adulterating honey, knew nothing about it, and thus could not bring any influence to bear to defeat it.

California is now in way of fighting adulteration successfully. We have a good law, and I see no reason why the old Union should not make use of this law, and make California the scene of the first big fight. I believe we can make no better use of the funds we have on hand. As a member of the Union, and also one of the Vice-Presidents, I stoutly urge that we at once proceed to fight adulteration under our State law right here in California. I shall at once write to the General Manager to this effect. I hope all the Vice-Presidents will do the same. I hope, too, that members of the Union, not on the Advisory Board, will write to the American Bee Journal to the same effect. A strong case made in such a city as San Francisco, and carried to successful completion, would have magnificent influence throughout the whole country. The Union has got to do this, or something akin to it, or else it will be dissolved and possibly merged into the other organization. I hope there will be free discussion of this matter.

The California Fruit Grower, in a recent number, makes a very curious assertion, as follows, in referring to adulteration:

"They cannot put up an extracted honey which in any

way is a compound, even though it be a fact that an absolutely pure honey is lacking in keeping qualities....." (My italics.)

This is certainly news, even to the oldest bee-keepers. Possibly the writer meant that pure honey was so good that you couldn't keep it. I find that real good fruit, or good eatables of any kind, are quick to go at our house, and always were. I also know that many adulterated articles, and honey adulterated with glucose is certainly no exception, will keep a long time if I am to be the eater. But, if the writer meant that pure honey would not keep or maintain its excellence, for a very long period, then he simply does not know what he is talking about. I question if honey can be mixt in any way to improve its keeping qualities. It is true that if unripe honey is extracted—that is, if honey is extracted before it is ready to seal—it will sometimes ferment; but this is really not honey. I should say that honey was a perfected article, and if extracted before the bees are ready to seal it, it is thin and watery, and could no more be called genuine honey than could watered milk be called genuine. Such honey contains altogether too large a percentage of water, and like sweetened water, or the sap of maple trees, it is quick to ferment or sour, and of course will very soon lose its flavor and excellence.

It is whispered abroad, that the manufacturers of adulterated honey are not a little exercised over the new law regarding honey adulteration, past by the last California Legislature. If reports are true, they are preparing for a big fight. I say, let them commence—the sooner the better—and let the old Union, which has already done such vallant service, hasten to the combat. We surely have right on our side, and there is no reason in the world why we should not commence this prosecution at once. I do not believe there is the least doubt but what in such action we shall be triumphantly successful.

EARLY FLOWERS—BUSY BEES.

I have several times referred to the fact that California flowers were a long time in blossom. This year seems exceptionally peculiar in this respect, owing, I presume, to the mild, copious rains of the winter, the flowers started exceptionally early—I think two or three weeks earlier than usual. I rather sorrowed at this, for I feared my botany class, which commences the first of April, might lose many of the spring beauties. I find, however, that my regrets were vain, for we have been able to get all the flowers. I think I understand this peculiarity of long bloom, so pronounced in California. The climate is so arid here, that, in nature, the flowers, at best, have a hard time of it. Thus, through the law of "natural selection," they would acquire the habit of long bloom so that they might be able to take advantage of all possible seasonal peculiarities.

Just at the opening of the honey season this year we had a week or more of exceptionally warm, beautiful weather. It was just at the time of the orange bloom. The trees were such a wealth of bloom as to gladden the sight of every lover of the beautiful. They also sent forth such a fragrance that the whole country seemed one great region of perfume. The bees were in their glory. In walking along the streets it seemed almost as if there was a swarm of bees, so loud was the hum of these little insects as they were passing to and fro from the orange orchards. It is needless to say that the swarming commenced with a vengeance. Many a person was led to regret his neglect to secure hives, etc., and found himself wholly unprepared for this early swarming mania. Bee-keepers should always be ready to catch the harvest.

Los Angeles Co., Calif., April 29.



Salt Water Cure for Paralysis and Foul Brood.

BY J. A. GOLDEN.

I have received the following from the editor of the American Bee Journal, with the request that I reply to it:

EDITOR YORK:—On page 180, Mr. Golden speaks of the value of "electrolyzed chloride sodium water" as a cure for certain diseases of bees. I am not a chemist, and cannot find any mention of that particular form of sodium in any work I have, nor is it listed in a full catalog of drugs. Will Mr. Golden kindly give some information about the drug? How does it differ from common salt water? Where can it be obtained?

He speaks of giving his "method a practical test as described in the article mentioned," but there is no other mention of the article. Will he kindly refer me to the article?

I do not think there is a single case of bee-paralysis in my apiary at present, but I want to be prepared to experiment more with it when it does appear again, as it is almost certain to do in time. In my experiments, common salt water has

had no effect on the disease. Will Mr. Golden kindly give me an idea of how many cases of bee-paralysis he has cured with this method?

O. O. POPPLETON.

I am glad to reply to your request through the American Bee Journal, thus answering a multiplicity of letters on the same subject, which have been received since requesting the electrolyzed sodium water to be tested on foul brood and bee-paralysis by those having bees affected with the maladies. It will be noticed, by reading my former article, that I have not had the opportunity to use the electrolyzed salt water, or hermitine, having no diseased bees in all this section of country, and if you will turn to page 888 of Gleanings for 1892, you will see, in reading my experience, that we had bee-paralysis pretty badly (a typographical error occurs at where it says, "And not a queen;" it should have read, "And not a queen missing"), and the salt water was applied, and no power of reasoning can convince me that salt water did not cure my bees of the malady. And, besides, all bees through this locality that had the disease were treated, and the disease has entirely disappeared. I could not give in numbers just how many cases had treatment, but in all between 30 and 40.

Having never failed in one instance to cure the disease called paralysis, with my mode of treatment with the salt water remedy, I obligated myself to accept for treatment one of the worst affected colonies of bees that T. S. Ford, of Mississippi, had in his apiary, upon the request of Ernest R. Root, of Gleanings, whom all will admit is wide awake to the interests and welfare of bee-keepers the world over. However, the colony never came to hand. After some time Mr. Ford wrote me that he would have to haul the bees some 30 miles to ship, and as I would have to haul them 9 miles after transportation by rail, at that time of the season it was running too much risk.

ELECTROLYZED SODIUM WATER.

Sometime ago, in reading a late work on photography, my attention was called to electrolyzed sodium water, from which I will copy the following extract:

"Extraordinary claims are being made for electrolyzed sodium water, or hermitine, which has not only proven a useful disinfectant for sewerage, but is said to have been adopted as an antiseptic in Paris hospitals. According to Dr. Proger, of Asniers, it is neither caustic nor irritating; it may be applied to the mucous membrane as to the skin; it instantly removes all bad odors, stops all putrescent fermentation, kills microbes more effectually and rapidly than any other antiseptic, cleanses and heals fetid wounds and sores, and is, in fact, an ideal antiseptic."

He also urges its advantages from a domestic point of view, for deodorizing and cleaning, and from a medical point of view as an antiseptic and healer. Dr. Proger reports successful use of it in cases of angina, coryza, and incipient diphtheria.

To produce electrolyzed sodium water, take a jar—glass or earthen ware—fill it with salt water any strength you desire; then take two copper wires, attach one to the negative and one to the positive wires of a battery, and insert the copper wires into the jar of salt water, and turn on the electricity. The stronger the battery the quicker the water becomes electrolyzed, thus dissolving certain salts contained in the mixture, as I am informed, and removing the electric current from the water leaves the water in an electrolyzed state, and if strongly charged a taste will give you some idea of the difference between electrolyzed and the plain salt water.

APPLICATION.—There are so many people that do not pursue a proper course in testing many of the methods given in bee-culture, consequently disappointments ("Didn't I tell you so?") are the result all along the line. To properly treat a colony of bees affected with paralysis, one must have a Lenox atomizer (which can be had for about 35 cents by mail, and no bee-keeper should be without one); a good, stiff scrub-brush, and two solutions of salt water—No. 1 and No. 2—No. 1 being a strong brine, and No. 2 sufficiently salt to taste quite a little salty.

Remove the frames and bees from the hive to be treated, to another hive or box, then give the hive a thorough scrubbing with solution No. 1—bottom-board and all; then lay a thin or light cover over the hive, having placed the hive on its stand; then shake every bee from a frame, and with the sprayer thoroughly spray the frame, comb, brood, and eggs, and set it in the hive, and so on till all have been thus treated. Then shake the bees at the entrance and cover the hive with the hive-cover. In five days take off the cover and thoroughly spray the combs, brood and bees. This time you need not move the frames, but send a spray down between the frames pretty thoroughly with solution No. 2, and continue every five

days as long as you see the bees showing symptoms of infection.

I am very anxious that some one should treat a case of foul brood in like manner with the electrolyzed salt water as well, and report the facts as they occur under the treatment.

I hope the foregoing will be satisfactory to the many questioners on this subject.

Morgan Co., Ohio.

CONVENTION PROCEEDINGS

Report of the North American Convention Held at St. Joseph, Mo., Oct. 10-12, 1894.

REPORTED BY LOUIS R. LIGHTON.

[Continued from page 792 of the Bee Journal for 1894.]

THIRD DAY—MORNING SESSION.

The convention was called to order at 9 o'clock, and proceeded to the work as indicated by the program.

Secretary Frank Benton read the paper written by Mr. W. S. Pender, of Hunter River, N. S. W., Australia, entitled,

BEE-KEEPING IN AUSTRALIA.

The late Dr. Wilson, according to the Australian Bee-Bulletin, is credited with being the first person to successfully import a colony of black bees into the Colony of Tasmania, and have them fully established. Swarms from these bees were sold at £5 (\$24) each, a number finding their way to various parts of the Australian continent. Some further importations were made, of which we have no definite record. The black bee is now to be found wild all over Australia. During seasons of plenty, swarms are very numerous, and if an excursion be made through the bush (forests), several may be often seen hanging on the limbs of trees, a fence, or other conspicuous place. Swarms often fly across towns, and it is not an unusual occurrence for them to settle somewhere in a public thoroughfare; the most noteworthy instance that I have seen was last season when a passing swarm decided that the back seat of a buggy, standing in the principal street of West Maitland, N. S. W., was the most suitable place to settle on, from which place they were successfully hived in a box by a passer-by without removing the horse from the vehicle. Now and then a swarm will build comb and commence brood-rearing on the place where it settles, as the branch of a tree, and there thrive for awhile.

In some seasons large quantities of honey are secured by felling trees containing a nest, the hollow part being from 6 to 15 inches in diameter, the combs often extending a distance of 6 feet along the hollow. It is not unusual for 100 pounds or more of extracted honey to be obtained from these nests.

The black bees in this country have proved to be excessive swarmers during seasons when they could get just sufficient nectar to keep up rapid brood-rearing, but when honey was being rapidly stored they seemed to forget about increase, and set to work to store. Swarming may commence in August and continue to early in the following March. Swarms can be purchased for from 60 cents each upward.

Bees are mostly kept in any convenient box that can be found. In some places the joints are so open, through warping and splitting of the timber, that the bees and combs can be seen from quite a distance; sometimes the hives are sheltered with sheets of bark, rough boards, etc.; at other times under a shed. After the swarm is placed in a hive no further care is taken of it until the autumn—generally the end of February—when they are driven to another box and allowed to do the best they can for winter. In many localities in a favorable season these driven bees will build complete combs, rear brood and store sufficient honey before winter, which they will come through in very strong condition.

Since the introduction of the frame hive and Italian bee, many have adopted the more modern methods of bee-keeping, which is carried on similarly to American bee-keepers. In fact, American bee-literature is what is mostly in circulation, and the methods there described seem to suit this country very well when modified to suit our honey-flows.

Our climate is such that very little attention is given to

wintering bees, beyond seeing that they have about 10 pounds of stores, a good queen, and a watertight cover. In the warmer parts the amount of stores for winter gives no concern, as there is generally sufficient food to be obtained from something, as grasses, weeds, underscrub, etc.; if there should not be a winter honey-flow. To give an idea of what a winter flow is sometimes like, I will cite the following:

During the season of 1892, Mr. M. Scoble, of West Maitland, N. S. W., started the spring with 17 colonies of black and hybrid bees. Anticipating favorable weather for the following winter, and noticing the spotted gum trees were heavy in bud (the buds of this tree are from 15 to 18 months from the time of forming to bursting), he allowed, or rather encouraged, his bees to swarm, hived all first and after-swarms on comb foundation, and by April had 90 colonies when the trees burst into bloom, and before the end of June 7,000 pounds of honey were extracted. This is very encouraging, is it not?

Now for reverses: The past season has been very wet, and that same bee-keeper started with 172 colonies, from which he did not get one pound of honey, and then had to feed some of his colonies for winter.

In some seasons the trees seem to arrange their time of blooming to make one continuous flow from August to the following June, with very little break between, and during such a season, with proper management, I believe it is quite possible to average 500 pounds of extracted honey per colony. These seasons are scarce, but taking one season with another an average of 150 pounds per colony in bushy (forest) country, and 40 pounds when bees have to depend entirely on cultivation, is obtained. The statistics at the end of this paper do not paint things so brightly, but it must be remembered that at least 80 per cent. of the hives are boxes in which a swarm is placed to take its chance.

The hive most generally in use is the Langstroth, with Simplicity size of frame, with all its modifications. A large number consider this size of frame too large, and have adopted the $\frac{1}{2}$ size, to take 6 instead of 8. The 8-frame hive with Root-Hoffman frames is now being very much used. A small number of bee-keepers use the Berlepsch hive.

The honey produced is mostly extracted, comb honey having very little sale. It is very varied in quality, the color varying from water-white to the dark color of golden syrup. The flavor may be very mild or very strong. Some of the finest looking honey is so rank in flavor when first extracted as to be almost unpalatable, but this rankness disappears after a time. The quantity of this rank honey produced is small. Most of the honey produced is of excellent quality. The largest quantity and the best qualities are produced during fairly dry seasons. Very little regard is paid by consumers to the color of honey, and when it is put on an open market a dark kind of honey will generally realize as much as a lighter colored kind. The price varies with the locality and the state of the market, varying from $2\frac{1}{2}$ d to 4d per pound (i. e., 5 to 8 cents). It is mostly sold in 60 pound tins.

At present fully as much honey is produced as a market can be found for, but as foreign markets are being opened up our home markets will be much relieved.

The wax produced is of the very finest quality, and is very varied in color, from a pure white to every shade of dark and canary yellow, and some even has a pinkish color. The white wax direct from the combs is very tough and quite different from that made white by bleaching. What is it that gives wax its color? I frequently find my bees build and seal their stores with wax quite a canary yellow in color. Now seeing that our honey is so varied in color, and that wax is a secretory production, is it not most reasonable to expect that the difference in color is due to the difference in food rather than impurities?

Propolis the bees must have more or less of, and varies in color and appearance from a dark red to a dirty brown, sometimes granular, hard and brittle, other times soft and sticky, and will draw out in threads several inches long before breaking. I find that only certain colonies do much propolizing, and these will gather more propolis than all the rest in the apiary, bridging over all spaces between frames, etc. Where mats are not used I find propolis reduced to a minimum.

Bee-keeping as an occupation is quite practicable here. There are a number who follow the pursuit wholly as a business, and others are going into it.

The diseases of bees, viz., foul brood and paralysis, are well represented, the former confined mostly to a few localities and the latter pretty general all over Australia. Foul brood is easily cured by simply hiving the bees on new frames having comb foundation starters or full sheets in a clean hive, the old hive scraped and painted inside and out.

Almost the whole of the native timbers yield large quantities of nectar, of which the eucalypti form the largest family. These are all hardwoods, and grow to a height of 150 and 200 feet. Some kinds will not throw out a branch until about 60 feet high, with a straight, slightly-tapering trunk to the top. These trees grow into a very dense forest (called here "the bush"). The nectar in some of the blossoms is so great as to be easily thrown on the hand if it is struck with a bunch of blossoms. The blossom is very weighty, causing the branches to bend very much.

There is really no systematic nomenclature of our timbers, each district calling trees by different names. Some of the trees in different districts seem to vary a little in appearance according to the kind of soil. There is also a great difference in the qualities of the timbers in different districts. Among the best honey-producing timbers may be mentioned spotted gum, ironbark (three kinds), stringbark, mahogany (three kinds), blue gum, red gum, grey gum, bloodwood, apple, water gum, etc. There is a very large variety of scrub plants producing excellent honey; grasses add a little. The gigantic lily has about a teaspoonful of nectar in each flowerlet, about 8 or 9 being open at one time, forming a head not unlike a clover flower, but about 12 inches in diameter, and red in color. Besides indigenous plants there are clovers, lucern, buckwheat, etc., which yield large quantities in some seasons.

In associations there are a number, the representative body being the National Bee-Keepers' Association, which is yet in an experimental stage in New South Wales, but holds an annual convention with an attendance of from 75 to 100 bee-keepers. The Victorian Bee-Keepers' Association and the South Australian Bee-Keepers' Association are doing good work. There are many district associations, viz.: Hunter River, New South Wales, Muswellbrook, Wellington Valley, Murrumbidgee, Hawesbury, and there may be others which have not come to my knowledge. There is one paper published, the Australian Bee-Bulletin, that is entirely devoted to bee-keeping, issued monthly, in West Maitland, N. S. W. Many of the agricultural papers devote a space to bee-keeping, all helping the industry more or less.

There are several firms manufacturing appliances, some few having quite an extensive business, using steam power, and some of the most modern all-iron machinery.

The business of queen-rearing is not neglected, and through the energy of breeders a strain of leather-colored Italian bees has been produced that are excellent honey-gatherers, prolific and hardy. A large number of yellow queens have been imported from America, but those who have bred them largely are mostly inclined to go back to the leather-colored bee. The yellow bees lack in hardiness and as winter honey-gatherers. The methods mostly adopted for queen-rearing is the Alley plan, or some modification of it. In some few cases Doolittle wax-cups are used.

Of bees that are native very little may be said, as all except one kind are solitary bees, of which there are very many varieties. The only bee that stores any honey is the "native bee"—*Apis trigona*. It is smaller than an ordinary fly, and stingless. It is numerous in certain districts all along the eastern part of Australia. It may live in other parts, but I have not heard any reports about them. As they are of no value for commercial purposes, very little attention has been paid to them, the quantity of honey stored by them being but small—a gallon would be an extra large yield. They are kept by several bee-keepers, more out of curiosity than for any advantage to be gained from them. Their honey-cells are an irregular mass of cups built about without any regularity, in size about 3/16 inch in diameter, and shaped like an inverted queen-cell stub, which is sealed over when filled and another built on top or to one side of it. The honey is thin, of a peculiar acid taste, very like ordinary honey mixed with vinegar. Their "wax," if I may call it by that name, does not seem to be wax at all, being in color brown or nearly black, and, when melted, just like sticky propolis. I cannot describe the brood, not having had a chance to examine their brood-nest, which is said to be under the shapeless mass of honey-cells. I extract the following from the Australian Bee-Bulletin, page 117, Sept. 25, 1893:

"They do not build comb in the usual sense of the word; secondly, the shapeless mass of tiny cup-shaped cells which constitutes their brood is not divided into layers in any way, but simply tunnelled with passages in all directions. When they wish to enlarge their brood-chamber they simply build a bunch of cells anywhere against the mass already built; in them the queen lays, and when the young brood is a certain age they seal, not each individual cell, but the whole bunch by covering it over with papery material, very similar to the brood-capping of the ordinary bee. The young bee hatches under this covering, but it is easily recognized as it is quite

white, and remains so for some days, gradually growing darker till it reaches the bronzed green shade of the matured insect. The brood-cells would just hold one grain of No. 1 shot."

I am sending a sample of the bees in a small bottle of their honey, and a small piece of their wax. The queen is very long, about 5/8 inch, the head and thorax being similar to the bees, but the body very long, of a light brown color. I could not see any signs of drones in the nest, tho they may not be any different from the ordinary bee. I have now two nests working in observatory hives; when I wish to see the queen I draw the wooden slide and allow the sun to shine through the glass on their nest. In about two minutes the queen will make her appearance, quietly crawling over the cells.

W. S. PENDER.

Drumfin Apiary, W. Maitland, N. S. W., Sept. 1, 1894.

N. B.—The statistical register for New South Wales, 1893, states that there are 44,693 productive colonies, 8,790 unproductive ones, yielding 1,139,557 pounds of honey (being an average of 255 pounds per colony), and 39,242 pounds of beeswax.

From the Registrar General's Report, Queensland, 773 bee-keepers reported 11,997 colonies producing 628,051 pounds of honey. The Government Statist, Victoria, reports 3,356 bee-keepers, 27,483 colonies yielding 725,233 pounds of honey, and 24,214 pounds of beeswax.

Statistics from other colonies have not come to hand.

It should be remembered that the above reports include all sorts and conditions of hives.

W. S. P.

Mr. Benton—I should hate to have it get out that I was present and permitted some of the statements in this paper to go by without criticism. First and foremost, the bee is not "*Apis trigona*" at all. It is not an *Apis*. Our hive-bees belong to the *Apis*, which is a Latin word meaning "bee." This bee comes under the *Trigona*, but is not an *Apis*. There are 40 or 50 species of the *Trigona*. I have had some of these bees under my care at one time, and took one little colony with me to Java from the forests of Ceylon, and carried them back into the interior of the Island of Java, and they worked as tho they were giants. They carried in loads of pollen that were very large indeed. I was able to observe their brood-nests very carefully, and Mr. Pender is positively in error in stating that they don't keep individual cells. They are grouped together as grains of wheat stood on end. You have all dug out *Bombus*, and they are about the same. The individual cells are sealed—that might be called an envelope of wax enclosing the brood-cells. Those overlap, and there are passages for the bees to pass beneath. When they wish to enlarge the brood-nest, they tear down the covering and add other cells. Outside of this are the honey-cells or honey-cups, like an inverted queen-cup on the edges of the comb. The feed is placed in first, and the queen lays the eggs on the feed. They lay the egg on a mass of pollen and honey mixt. It is not quite as dense as pure pollen would be. The egg is laid in this, and before it hatches it is sealed into the cells. The pupa or imago state is short. I have noticed that the *Melipona* of Brazil do the same thing. One thing of interest, which Mr. Pender has not mentioned is this, that for their protection, as they are stingless, they build from the center of the brood-nest a tubular passage that will lead up the inside of the hive, which seems to be composed of propolis, a resinous gum. This is built so that it usually hangs down, altho sometimes they omit it altogether. I once observed a nest in an iron pillar, and the opening only admitted one bee at a time, and they built no tube for they seemed to understand that it was not necessary to defend themselves. I have never seen a swarm of them.

Pres. Abbott—They could be classed *Apis* if they do swarm in a body, for the word *Apis* comes from a Greek word meaning "clinging"—"hapto."

Mr. Benton—I beg leave to differ from you. These names have been given to identify a certain insect, *Apis* having been applied to a certain genus. These names have been given by men who have studied the subject, not myself, and have established them, and we cannot take this bee out and call it by another name.

(Continued next week.)

Back Numbers Since Jan. 1.—We are able to supply complete sets of the Bee Journal since Jan. 1, 1897, to any who may desire, at two cents per copy. There are a number of new readers who perhaps would like to get some of the first numbers of this year, to complete their volume for 1897. We shall be glad to furnish them as long as they last, at two cents each.

Questions AND Answers

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Rape as a Honey-Plant.

Is rape a good plant for bees?

Peris, Oreg.

ANSWER.—Rape is counted one of the best honey-plants. In this country little is said about it, perhaps because there are seldom large fields of it, and a few scattered plants amount to little, no matter how good a yielder a plant may be. But in Germany bee-keepers count much on it, sometimes hauling their bees to the rape-fields during the period of bloom.

Keeping Ants Out of Hives.

How can I prevent ants from getting into the bee-hives?

MISSOURI.

ANSWER.—In the North it's about as well to let them alone. They don't seem to do much harm, seeming to care mainly for the heat of the hive. If they are in a hive that has quilts or sheets over the brood-frames, they make nests on top of these latter, and annoy the operator by running over his hands and biting them every time the hive is opened, but if a hive is used with a board cover and no quilts to afford lurking places, the bees will keep them out without any trouble. But in the South they are reported as sometimes being mischievous to a serious degree. Possibly the kind is different. Some succeed in driving them away by sprinkling pulverized borax. A sure plan is to have the hive on a stand with four legs, the foot of each set in a sardine box or something of the kind filled with water or kerosene oil. If water is used, it must be filled up as fast as it evaporates.

Putting on Supers, Etc.

The weather is fine, and I have my one colony of bees on the summer stand, apparently doing well. H. J. W. wants to prevent swarming. Now I would like my one colony to swarm say five times, then next winter I would try wintering some on the summer stands and some in the cellar. Small grain is all in, and wheat is up. Imagine me sitting on the grass these warm days watching the bees. I would give a cooky if I could see inside of the hive, and what they were doing. I feel sorry for Mr. Boomer. I rather think if he drops the Bee Journal he will feel lonelier still.

I see something about putting on two supers, but I don't know when to put on the first. S. D.

ANSWER.—If you want to know what's going on inside the hive, why don't you lift out the frames and see? But it may be better for the bees not to be disturbed, for when they are getting along all right, the less they are meddled with the better.

The general rule is to put on the first super when you find the bees putting bits of white wax along the upper parts of the comb or along the top-bars. If white clover is your chief yielder, there will probably be no need to put on a super till you find white clover in bloom quite plenty.

Starting with Bees from Trees.

I have a piece of land in the foothills of the coast range mountains, and while there last summer, in June, I noticed many bees working on the clover and creeping blackberries, and being an old bee-hunter I had no difficulty in locating two trees in a very short time. I cut the trees, and from one of the colonies I secured 100 pounds of nice, clear honey, and from the other 300 pounds. All people that tasted it pronounced it of the finest quality. I saved the bees, as it is no trouble to do so. I would not break up their home if I could.

Now I do not suppose it would pay any man to hunt bees to start an apiary with, that was not an expert in hunting them, but I can find them as sure as one bee comes to my bait; and what I wish to know is, must I save the brood, fasten it into frames, and give them new queens?

I find that there is a big difference in the bees I find on the flowers, and half, or nearly so, have more or less Italian blood, but as I am not an expert I cannot tell how much Italian blood. But the woods are full of bees, and I am quite sure this is one of the best locations for bees in the State, as the honey-flow is continuous. First come the blackberries and huckleberries (red variety); then the white clover and mountain pea-vine, which blooms for two months, and its bloom is always covered with bees; and long before that is out of bloom comes the elkweed (or fireweed), which blooms till frost comes the last of October. I am sure it's a good location, and I would like to try my hand in the bee-business. I can get the bees, and get them into the hives, but the question is to make them store the honey in the hive as well as they do in the trees. I am anxious to learn.

I enjoy the Bee Journal very much. Success to its editor and the paper. I am glad of the vigorous stand it takes against all frauds. Count me in to lend a hand, if needed at any time. I had the pleasure of being present at the California State Bee-Keepers' Association at Los Angeles the past winter, and enjoyed it very much. Montaville, Oreg.

ANSWERS.—When saving the bees, it is well to put in frames all the worker-brood, but it isn't necessary to give them a queen, for their own queen will do just as well in a hive as in a tree.

If the workers of a colony all have three yellow bands they are considered pure Italians.

There is no reason why they should not store as much honey in a hive as in a hollow tree. One as successful as you in getting wild bees, especially with such yields of honey, ought to be able to build up an apiary in that way very profitably.

Fastening Foundation in Sections.

Do you think the plan for fastening foundation in sections, given on page 241, is any better than the Daisy fastener?

IRENE.

ANSWER.—I don't know of any respect in which it is any better, and can hardly see how any one who has given the Daisy a fair trial could possibly prefer the plan of cementing with melted wax. In the latter case the starters must be carefully laid in place and time taken to pour on the melted wax, whereas with the Daisy the foundation comes immediately in contact with a plate kept so hot that the edge of the foundation is at once melted, then a quick motion slides it at once against the wood, resulting in such rapid work that the other is not to be compared with it. When it comes to cutting the comb of honey out of the section, that on which the Daisy fastener has been used is as easily cut through as the natural comb.

Killing Drones and Deserting.

I transferred a colony of hybrids from a box-hive to a movable-frame hive. I cut out the combs and tied them in the frames, leaving out the drone-comb. They seemed very well satisfied, but in a few days they commenced killing the drones, and in about a week after transferring them they swarmed out. I hived them in another gum, and they are working nicely. I have a colony of blacks transferred, and they are staying in all right. Why did they kill the drones and swarm out? I examined the hive they were in—they had gnawed the caps off the brood.

Since the last day or two all my colonies are fighting drones. Bees have not swarmed yet, either, nor gathered any surplus, but have built up well.

Denny, S. C., April 15.

ANSWER.—The killing of drones probably had nothing to do with the swarming out. The drones were probably killed because the bees failed to find pasturage. It isn't easy to say why they left the hive. As it occurred during or just after their killing drones, it could not be a case of natural swarming, but was a case of desertion, and was caused by some unsatisfactory conditions, possibly because too hot. But something entirely different may have been at the bottom of the trouble.

☞ This is a good time to work for new subscribers.



THE AMERICAN Bee Journal

 OLDEST BEE-PAPER IN AMERICA

GEORGE W. YORK, Editor.

 PUBLISHED WEEKLY BY

 GEORGE W. YORK & COMPANY,

 118 Michigan St., CHICAGO, ILL.

\$1.00 a Year—Sample Copy Sent Free.

[Entered at the Post-Office at Chicago as Second-Class Mail-Matter.]

Vol. XXXVII. CHICAGO, ILL., MAY 20, 1897. No. 20.

Editorial Comments.

What Shall the Harvest Be?—If we may judge from the reports we have received from almost every nook and corner of the continent this spring, a good honey harvest may be expected this year. In many localities the white clover has once more made its appearance as of old, which many take as a prophecy that better honey years are about to re-appear. But whatever comes, let all be prepared. If that "whatever" should prove to be a rich harvest of sweetness, then don't run the risk of missing it by being unprepared to take advantage of it.

In a few short weeks now, many will be able to answer definitely the interesting question—"What shall the [honey] harvest be?"

The St. Joseph Convention Report, which should have been completed in December, 1894 (and would have been had the Secretary done his duty), is taken up again on page 309 of this number. We will publish the balance as taken by the stenographic reporter, Mr. Louis R. Lighton.

We thought best to delay giving the remainder of the report until all others were done with, this spring, so now we can go right through with what is left without any break. We supposed there was quite a good deal left, but three or four numbers will probably end it. What a pity it is that we couldn't have had it all when it should have been here, in November, 1894, for then we could have completed it that year. But history is quite interesting reading to many, and so this closing part of the St. Joseph convention report may prove to be. We hope it will be so.

Keeping Qualities of Extracted Honey.—

Mr. C. H. Clayton, of Los Angeles Co., Cal., the framer of the excellent anti-adulteration of honey law in that State, wrote us as follows, May 1:

EDITOR YORK:—A recent issue of the California Fruit-Grower calls the attention of dealers, grocers and shippers of honey to the new law affecting their interests (the anti-adulteration law which it publishes), and among other things has the following choice gem:

"They cannot put up an extracted honey which in any way is a compound, even though it be a fact that an absolutely pure honey is lacking in keeping qualities. They cannot manufacture or sell a honey which is an admixture, no matter how innocent or desirable that admixture may be."

I italicise the part of the foregoing that deserves our attention, as it foreshadows the defense, or justification, which will be set up by the adulterators. What have you to say as to the keeping qualities of pure extracted honey?

As to the desirability of manufacturing an "admixture"

—frankly I don't believe either the producer or the consumer desires it, so it remains only "desirable" to dealers, grocers, and shippers. I wish you would take up this subject of keeping qualities, and bring out all the real information obtainable. It's going to be the fight. Yours truly,

C. H. CLAYTON.

It will be noticed that Prof. Cook, in his article on page 307, also refers to this same subject.

We think Mr. Clayton has it exactly right, when he suggests that the "admixture" is desired only by dealers, grocers and shippers, and for the simple reason that they have been getting a bigger profit out of handling the fraudulent article than out of the pure honey.

The idea that a properly ripened article of "absolutely pure honey is lacking in keeping qualities" That will be news to bee-keepers. What excuses won't the dishonestly inclined hatch up in order to create prejudice and to uphold their miserable cause?

But suppose we help out our California friends—the bee-keepers—with a little testimony along the line of the keeping qualities of extracted honey. How long has it been kept in perfect condition by the older readers of the Bee Journal? Let's hear from a few, just on a postal card.

Our opinion is that first-class extracted honey will keep indefinitely.

New Union and the Bee Journal.—In order to help our subscribers, and also the United States Bee-Keepers' Union at the same time, we have decided to offer a year's subscription to the American Bee Journal and a year's membership dues in the New Union, both together, for \$1.75. But it must be understood that in order to get this rate, all arrearages of subscriptions must be paid, and the \$1.75 rate to apply on advance subscription.

Now send us your orders, and we will attend to turning over the \$1.00 membership fee to the New Union, on each subscription to the Bee Journal as per the above offer. This ought to add 500 members to the New Union by June 1. If it does, our contribution will be just \$125.

Now, if you want to see the New Union succeed in its grand work, in the interest of all the bee-keepers, come on with your cash. General Manager Secor is just aching to do his part whenever he sees sufficient funds in the treasury to pay the bills.

Noticing New Bee-Papers is thus very aptly referred to by Editor Holtermann, of the Canadian Bee Journal:

"It is no kindness to draw attention to a paper which in nine cases out of ten is trying to occupy a field already well covered, which will give inferior service, and when, often, the unlucky subscriber gets after a few months nothing for his money."

That's it, exactly. Why in the name of creation should any new papers in any line be encouraged by those already fully occupying that line? We could mention several outside of bee-keeping that would better never have been started at all, for they proved only a source of loss to their publishers.

But it seems some people have a sort of itching to get into the publishing business, and that often without the slightest adaptation to that very risky field. What, then, can be kinder on the part of every one, than to discourage all such ventures when it is known that only loss and disappointment can be the legitimate and final result?

New papers in any field already fully occupied must expect to have a hard road to travel, and then feel pretty well assured that success is well nigh unattainable.

In view of the wreck-strewn shore of the tempestuous sea of bee-journalism, it would seem that no sane person would for an instant entertain the idea of starting a bee-paper these days. But, then, 'tis said that the fools are never all dead.

Keeping Insects Out of Honey.—Prof. Cook tells in *Gleanings* how those troubled with insects getting into comb honey might prevent it. He says:

"I think that, in most cases, simply wrapping such packages in paper will prevent insect attack. The thing to be sought is to keep the odor of the honey from passing through the paper so as to attract the insects. This might make it necessary to seal the package hermetically. To do this the bee-keeper has an easy method right at his hand. He has only to dip the paper in hot melted wax, getting just as little wax as possible on it. Then if he wraps the section while the wax is a little warm, he will so seal the package that no odor of honey can escape, and so the insects will not be attracted. I should have great confidence that this would work, but of course it would have to be tried before we would warrant it. I should also have great faith if we used paraffine instead of the beeswax."

Prof. Cook says further that as California is such "a perfect paradise for insect life," the production of extracted honey is more suitable there than comb honey. You see, when extracted honey is once in screw-cap cans, there isn't very much danger of insects getting into it.

Foundation-Mills and Extractors.—Editor Root, in speaking of patents on comb foundation-mills and honey-extractors, said this in a recent issue of *Gleanings*:

A short time ago Mr. Bingham expressed himself as believing there were no patents on foundation-mills. Something like a dozen, I believe, have been issued. The most important were from the following named parties: W. C. Pelham, Mrs. Frances Dunham, E. B. Weed, and last, but not least, the lamented Samuel Wagner. The latter obtained the first patent. For two years his assignee, Mr. Porrine, prevented us from making foundation-mills and foundation, there being two years more life to the patent.

Something like 100 patents have been taken out on honey extractors, in the United States—at least, we have on file in our office that number. It seems now as if no patent that might be issued would be worth anything to the inventor.

Encyclopedia for Beeswax.—Some time ago we offered a splendid work of eight large volumes, called "The New Standard American Encyclopedia," having nearly 4,000 pages, and over 300 colored maps, charts, and diagrams. Size of volume, 2 inches thick, 8½ wide, and 11½ long. As per that offer, last published on page 186, the eight volumes were offered by freight for only \$19 cash. We can furnish a set or two at that price, bound in half morocco; or will exchange a set for 75 pounds of yellow beeswax, delivered at our office. You would be more than satisfied with the Encyclopedia, and a set of such books ought to be in every family for reference.

The Horse—How to Break and Handle.—This is a pamphlet of 32 pages, giving complete instructions for breaking and educating colts, teaching horses to drive, and for use under the saddle, together with many instructions which have never before been published, and which are the result of the author's experience covering a period of 20 years. By Prof. Wm. Mullen, with whom the editor of the Bee Journal is personally acquainted. Price, postpaid, 20 cents; or given as a premium for sending us one new subscriber to the Bee Journal for the rest of the year at 60 cents.

The Combination Offer, on page 314, is exceptionally desirable. Why not get that bee-keeping neighbor or friend of yours to let you send in his dollar for a year's subscription to the Bee Journal, and then you add 25 cents to it and secure for yourself the *Ladies Home Companion* and the book, "Samantha at Saratoga?" Or, pay your own subscription for a year in advance and for the extra 25 cents get the *Home Companion* and the book. We do not expect to be able to continue this liberal offer much longer, so if you want to take advantage of it, it will be well to do so now.

Beeswax Wanted.—If you want to get cash for your beeswax promptly, ship it to the publishers of the Bee Journal. We are now paying 25 cents per pound for good yellow beeswax delivered at our office. Address, GEORGE W. YORK & Co., 118 Michigan St., Chicago, Ill.

The Weekly Budget.

MESSRS. LEININGER BROS., of Putnam Co., Ohio, writing May 12, said: "The season here is opening very encouragingly. We expect a large crop of honey."

MR. A. A. ANDERSON, of Ontario, Canada, says: "I am very much pleased with the Bee Journal. I have kept bees on a small scale for over 20 years (since I was 15 years old), and have made them quite a study."

DR. MILLER says in *Gleanings* that it is just as much fun for him to watch the bees get to work this spring as it was 35 years ago. Strange what a lasting fascination there is about bee-keeping. It also seems to keep its devotees young in both heart and body. Hurrah for the blessed bees!

MR. J. W. VAN ALLEN, of the firm of Van Allen & Williams, in Crawford Co., Wis., reported, May 7, that Mr. Williams was very sick with lung fever; also, that Mr. Van Allen's 12-year-old son was just recovering from a similar attack. We hope both afflicted ones may soon be fully restored to health again.

MR. FRANK McNAY, of Wisconsin, when sending his dollar for another year, said: "You should raise the price of the American Bee Journal soon, if you keep on improving it." Yes, you are quite right, Mr. McNay, but at present we shall try to continue to give the best we can get up for only \$1.00 a year. Two cents is surely a low price for one number of the Bee Journal.

MR. WM. S. BARCLAY, of Beaver Co., Pa., wrote us May 12 that on Nov. 1, 1896, he suffered from a stroke of paralysis which affected his right side and particularly the right arm. We are very sorry to learn this, as Mr. Barclay is one of our oldest subscribers. We trust he may continue to recover from the effects of that stroke. He wished us to make this announcement so that those whom he owes letters may know why he has failed to reply.

Now for New Subscribers for the rest of 1897: We would like to have each of our present readers send us at least one new subscriber for the Bee Journal before June 1, 1897. That surely will not be hard to do, when they will need to pay only 60 cents for the rest of this year. That is about 8 months, or only 7½ cents a month for the weekly American Bee Journal. Any one with only a colony or two of bees should jump at such an offer as that.

Now, we don't ask you to work for us for nothing, but will say that for each new 60-cent subscriber you send us, we will mail you your choice of one of the following list:

Wood Binder for the Bee Journal.....	20c.
50 copies of leaflet on "Why Eat Honey?".....	20c.
50 " " on "How to Keep Honey".....	20c.
50 " " on "Alsike Clover".....	20c.
6 copies "Honey as Food and Medicine".....	20c.
1 copy each "Preparation of Honey for the Market" (10c.) and Doolittle's "Hive I Use" (5c.).....	15c.
1 copy each Dadants' "Handling Bees" (8c.) and "Bee-Pasturage a Necessity" (10c.).....	18c.
Dr. Howard's book on "Foul Brood".....	25c.
Kohnke's "Foul Brood" book.....	25c.
Cheshire's "Foul Brood" book (10c.) and Dadants' "Handling Bees" (8c.).....	18c.
Dr. Foote's Hand-Book of Health.....	25c.
Rural Life Book.....	25c.
Our Poultry Doctor, by Fanny Field.....	25c.
Poultry for Market and Profit, by Fanny Field.....	25c.
Capons and Caponizing.....	25c.
Turkeys for Market and Profit.....	25c.
Green's Four Books on Fruit-Growing.....	25c.
Ropp Commercial Calculator No. 1.....	25c.
Silo and Silage, by Prof. Cook.....	25c.
Bienen-Kultur [German].....	40c.
Kendall's Horse-Book [English or German].....	25c.
1 Pound White Clover Seed.....	25c.
1 " Sweet ".....	25c.
1½ " Alsike ".....	25c.
1½ " Alfalfa ".....	25c.
1½ " Crimson ".....	25c.
Queen-Clipping Device.....	30c.
The Horse—How to Break and Handle.....	20c.

We make the above offers only to those who are now subscribers; in other words, no one sending in his own 60 cents as a new subscriber can also claim a choice of the above list.

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The Woman's Home Companion has no equal in the excellence of its special departments devoted to **Fashions, Fancy Work, Housekeeping, Floriculture, Talks with Girls, Mothers' Chat, Home Adornment, Children**, etc. Of the noted writers who will contribute their best work to the columns of the Companion during the coming year we have space to name only a few: **Mrs. Mary J. Holmes, Josiah Allen's Wife, Opie Read, Harriet Prescott Spofford, Julia Lagruder, Hezekiah Butterworth**, and many others. The Companion gives 24 to 32 pages, size 11 by 16 inches, each issue, printed on fine paper and put into a handsomely illustrated cover. Specimen copy free upon request.

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SAMANTHA AT SARATOGA, Agents sold them for \$2.50 each, but say \$1.00
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Filling Supers Fast.

Bees are booming. I have had 71 swarms from 77 colonies. I had two swarms in March. I have taken off some honey. Bees are filling supers fast. A. BISHOP.
Callahan Co., Tex., May 3.

Best Season in 1896.

I work my bees for comb honey exclusively, and I get 15 cents per pound at home for all my honey. Last year was the best season for honey I ever saw in this or any State. H. H. BROWER.
York Co., Nebr., May 4.

Bees Wintered Well.

I have about 120 colonies of bees. They wintered well last winter. I got from them about 4,500 pounds of nice honey in sections last year. WILLIAM FLEMING.
St. Croix Co., Wis., May 5.

Cold and Unfavorable Weather.

Bees wintered well here the past winter, but the weather so far this spring has been very cold and unfavorable. At present it freezes quite hard nearly every night. C. MONETTE.
Fillmore Co., Minn., May 1.

Bee-Keepers are Happy.

Spring has come at last, and the honey-plants are coming into bloom. Bees are humming, the birds are singing, and all Nature seems to be putting on new life. The bee-keepers are happy, for there is such an abundance of snow in the mountains for irrigation, which insures one of the best honey-flows Utah has ever seen, if we can only get warm, dry weather. E. S. LOVESY.
Utah Co., Utah, April 30.

Storing Honey Rapidly.

My bees are storing honey very rapidly now. We have a big peach, cherry and apple bloom, and the bees are making good use of the opportunity. My bees came through the winter stronger and in better condition than I ever had them before. April 24 I had the finest Italian swarm come out I almost ever saw at any season of the year, and they are doing finely. J. ALLEN ANDERSON.
Loudoun Co., Va., April 30.

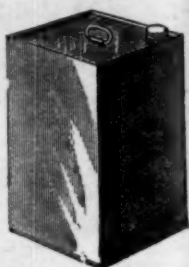
Bees Working on Willow.

We have had a cold and wet spring so far with but four days that bees could work. The last week has been warm, and the bees have been busy working on willow bloom, which yields lots of honey. In 1896 my scales colony yielded 18 pounds in three days. The prospects look well for a clover crop, which has had plenty of rain. There is a lot of low land that cannot be put into corn this year, so there will be lots of buck-wheat grown next fall. I have 50 colonies that are in good condition now. Times are hard, and so people will not buy much honey. I hope for the best. Henry Co., Ill., May 1. J. F. WIRTH.

Successful Wintering of Bees.

I have read a great deal in bee-books and also in the "Old Reliable" about wintering bees in cellars, about keeping them in an even temperature, free from dampness, noise, etc.

Early last fall I tacked burlap on the bottom of the supers, filled them with chaff, and placed on each colony. November 13 I



Finest Alfalfa Honey!

IT SELLS ON TASTING.

The Honey that Suits All Who Buy It.

Low Prices Now!

We can furnish **White Alfalfa** Extracted Honey, in 60-pound tin cans, on board cars in Chicago, at these prices: 1 can, in a case, 7½ cents per pound; 2 cans in one case, 7 cents; 4 cans (2 cases) or more, 6½ cents. The Cash must accompany each order. **Fine Basswood** Flavor Honey at same price; also in 270-lb. barrels.

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Works Like a Charm.

The Monette Queen-Clipping Device **WORKS LIKE A CHARM.** With it I have clipped 30 queens, all in one day, when examining my bees. WM. STOLLEY, Grand Island, Nebr.

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DR. GEO. LACKE, Newburgh, Ind.

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For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 25 cents per pound, CASH; or 27 cents for whatever part is exchanged for the Bee Journal, Honey, Books or Seed, that we offer. If you want **cash, promptly**, for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

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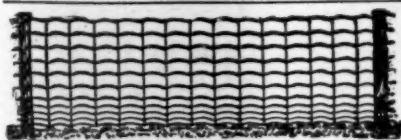
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2-frame Nucleus, with Queen, only \$2.
B. P. Rocks, White Leghorns, B. Leghorns, Black Minorcas, Buff Cochins, Part. Cochins. L. Brahma, S. S. Hamburg—Eggs from all these, 15 for \$1.00.

Also, Berkshire Pigs for sale. Write for what you want. Stock all registered pedigree.

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18A4t TILBURY, ONT., CANADA.



Confidence Restored.

Not Page confidence, that was never lost. Sales increased every year through the late "unprosperousness." Now comes 25 per cent increase for the month of April. This shows that people like the **Coiled Spring** and like to buy it of the owner, rather than those who attempt to appropriate it without leave or license.

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Bees by the Pound, \$1.00. Queens \$1.00. Nuclei, 2-frame, with Queen, \$2.50; 1-frame, \$2.00. Also, **Barred & White Plymouth Rocks, and Silver-Laced Wyandottes** Eggs at \$1.00 per setting of 15. Address,

Mrs. A. A. SIMPSON,
16A13 SWARIS, GREENE CO., PA.
Mention the American Bee Journal.

the board whenever the mercury reaches 55 degrees.

In the last days of April I examined every colony and did what I could to aid the bees in "house-cleaning." I found 24 of the 25 colonies with plenty of bees and abundant stores, so they have not got to live "from hand to mouth." I saw either a queen or capt brood in every hive.

The cause of my losing the one colony was this: In uniting two colonies last fall I killed one queen, and the next day I found a dead queen at the entrance. I mark the colony, "queen doubtful." My doubts materialized. It was found queenless this spring. It is the first queen I ever lost by uniting, and the first colony I have lost in the last six winters.

I enjoy very much the regular weekly visits of the American Bee Journal, and I find its pages very helpful and instructive. I am indebted to it for many practical ideas.

The "New Wood Binder," for holding a year's numbers of the American Bee Journal, is a daisy. I find it very convenient.

J. P. SMITH.

Sullivan Co., N. H., May 10.

Good Prospects for Honey.

My bees came out in better condition this spring and with less loss than for several years past. Out of 30 colonies I only lost one. All six that I wintered in the cellar came out in fine condition. The rest were wintered on the summer stands, covered and packed with straw, and left open on the south. They are now in the midst of a beautiful crop of fruit and dandelion bloom, from which they are storing honey very fast. The next will be the white clover, for which there is now a good prospect.

J. S. SLEETH.

Livingston Co., Ill., May 2.

Moth-Balls in Hives, Etc.

In the American Bee Journal of recent date some one asks "if the moth-balls hurt the bees"—a question suggested, I presume, by what I wrote a few weeks ago. In answer I will say that the bees rolled the ball to the entrance, and there it remained until small enough to be pushed out. I think that the bees didn't take kindly to it, but I could not see that it hurt them.

I put large balls in three of my hives about March 1, and they are strong colonies now, so I am confident that the bees were not hurt.

If I had only known in time how to have handled my bees I should have had "worlds of honey" this spring, but being a novice in the business, I have lost much. 'Tis said that experience is a dear teacher, but I hope to be able to overcome my ignorance by another year, and have a balance to my credit in the bank.

I think I have one of the finest places for bees—there is such an abundance, as well as variety, of bee-pasturage. At present the famous horse mint is blooming, corn is beginning to tassel, soon the cotton will bloom, besides an occasional shower keeps many shrubs blooming during the summer and fall.

Bees began to swarm the first of March, and have been booming ever since.

(Mrs.) M. M. DUNNEGAN.

San Patricio Co., Tex., April 27.

Poor Season in 1896.

Last year was a poor one in this county for honey-gathering, on account of the long drouth in the fall of 1895, which killed most of the clovers and other honey-yielding plants of our section of the country. My bees did not gather one pound of white honey last year—what I call salable honey. I took from them a few pounds of brown honey to make some cough syrup—I suppose about 15 pounds—and that was the whole crop for that year. It was the poorest year I ever had for the bees, and I have a long row of well-painted hives, and a good house over them, open on the south

Beeswax Wanted for Cash

Or in Exchange for

Foundation—Sections—Hives
or any Other Supplies.

Working Wax into Foundation for CASH A Specialty.

Write for Catalog and Price-List, with Samples of Foundation and Sections.

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AUGUSTA, WIS.

SMOKERS and FOUNDATION

We do not catalog the Quinby or Hill Smokers this year, but there may be some who prefer these styles. We still have a few, and offer them at these special prices to close out:

The Quinby—2-inch barrel, single-blast, 35c.; postpaid, 50c. 2½-inch, double-blast, 60c.; postpaid, 75c.

The Hill—3-inch barrel. 40c.; postpaid, 60c.

VanDeusen Thin Flat-Bottom Fdn.

In 25 pound boxes, at only \$10.50 per box, while it lasts. Address,

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ONE MAN WITH THE UNION COMBINATION SAW

Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitering, Rabbeting, Grooving, Gaining, Dadoing, Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery. Sold on Trial. Catalogue Free.

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Egg Preservative

That will keep Hen's Eggs perfectly through warm weather, just as good as fresh ones for cooking and frosting. One man paid 10 cents a dozen for the eggs he preserved, and then later sold them for 25 cents a dozen. You can preserve them for about 1 cent per dozen. Now is the time to do it, while eggs are cheap.

Address for Circular giving further information—

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Italian Queens By Return Mail.

Untested, 50c.; Tested, \$1.00.
Nuclei, 2 frame, \$2.00, including a good Queen. Bees by the Pound.

E. L. CARRINGTON,
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Golden Texas Queens!

Dr. Gallup says they are the best he has in his yard.

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On FOUNDATION COMB to introduce **Forrest New Method of Sheeting Wax** by Automatic Machinery.

Write for descriptive Circular Price-List and Samples. **N. B. FORREST,**
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BEES & NUCLEI.

We can supply Good Full Colonies of Italian Bees in 8-frame Langstroth hives, and 3-frame Nuclei. They are in Lee Co., Illinois, 100 miles from Chicago. If you wish to buy, write us at once, as to what and how many you want, and we will quote you price.

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"Practical Hints" will be mailed for 10c. in stamps. Apply to—

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That covers the whole Apicultural Field more completely than any other published, send \$1.25 to Prof. A. J. Cook, Claremont, Calif., for his

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Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

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Full Colonies at \$5.00; Nuclei, \$1 per Frame.

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Also a Full Stock of the

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Steel Wheels

Staggered Oval Spokes.

BUY A SET TO FIT YOUR NEW OR OLD WAGON

CHEAPEST AND BEST

way to get a low wagon. Any size wheel, any width tire. Catal. FREE.

ELECTRIC WHEEL CO., Quincy, Ill.

20E13 Mention the American Bee Journal.

side; and also a well set and well trimmed thorn hedge at the back of them, so they are well protected from cold and heat, and they always receive the best of care. But they won't gather honey for me when there are no honey-yielding plants, such as was the case last year. They cost me many dollars to get them through the winter, but I hope to get it all back this season, and more besides, for all is fair for a good honey crop this summer, provided the weather is suitable, so that bees can work. Our pears, cherries, and other small fruits are now in full bloom. **ELISHA CAREY,** Bucks Co., Pa., May 2.

Too Cold for the Bees.

This weather the bees have to remain at home while the apple trees are just a few feet above their heads in full bloom, and have to content themselves with their mother by singing "Gentle Annie" in her ear, and telling her there are better days dawning; while what few drones have made their appearance are "trembling in their boots," as the honey grows less. They know it's good by "sweet home" when the bees say to them. "Self-preservation is the first law of our hive." It puts me in mind of a lot of women cleaning house. Some have a drone by the ear, leading him to the door; others leading him out under the whip; some drones are at the entrance on the wing, singing "Boom-de-ay;" some are piled up outside of the hive on their knees, praying for a honey-flow. Oh, by the way, the bee-man is, too, and if the honey comes the bees will come to the door and say, "Now, old paps, we were just joking when we fired you. Come in Bill, Jake, John, Sam and Ike; but if honey gets scarce again, you will have to pack your grips and start for Frazier river, or go to India to see your big relatives, the Apis dorsata." **GEO. POINDEXTER,** DeWitt Co., Ill., May 1.

Experience in Wintering Bees.

I had an experience in wintering the bees in one of my yards that was somewhat of a surprise. Late last fall I had to rebuild my bee-cellar at this yard. It had been made of slabs and dirt, but I rebuilt it with a stone wall; it being so late the wall did not dry out, the cellar was so damp I feared heavy loss among the 65 colonies it contained. About the middle of winter I had a load of dry oats-straw and chaff scattered on the cellar bottom and over the hives. The temperature was kept at about 40 degrees; toward spring, after very wet weather, water was found standing 8 or 10 inches deep in the cellar—the hives had been placed 14 inches from the floor, so no water got in them. The water stood thus in the cellar for over two months before those bees were taken out, which was the middle of April, and they came out in good condition, with very small percentage of loss, and nearly all strong. So much for good luck. **HARRY LATHROP,** Green Co., Wis., May 1.

A Tennessees Rejoinder.

Mr. Wm. Webb said, on page 204, that it was a very good thing that one man did not know it all. Yes, he is just right, for if he had known what the word "system" means he would not have written as he did. Webster's dictionary says: "System—connected assemblage of parts or things, regular order or method. Systemize, to reduce to a system, or regular method; to methodize."

There are 42 bee-keepers in my settlement, and only two men are keeping bees in movable-frame hives. Mr. W. said he was not able to say how many practical bee-men there are along the Smoky mountains. I have been on both sides of his home, through 13 counties, east and west directions, and there are at least 20 keeping bees in logs and plank gums to one in mov-

able-frame hives. So it can readily be seen that a regular method is the system.

My article on Smoky mountain bee-keeping does not insinuate that there is not a practical bee-keeper in or along the Smokies. There are several, and in the wealthy parts of the State there are a great many practical bee-men.

Bees are in fine condition here. If the honey-flow comes all right, they will "get there" all the same. **G. W. WILCOX,** Blount Co. Tenn., May 2.

A Book Recommended by Dr. Gallup.

THE NEW METHOD

In Health and Disease.

By W. E. Forest, M. D., 12th Edition, Revised, Illustrated, and Enlarged. This is the greatest and best work ever published as a HOME PHYSICIAN, and as

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It makes the way from Weakness to Strength so plain that only those who are past recovery (the very few) need to be sick, and the well who will follow its teachings cannot be sick. It is now in many families the only counsellor in matters of health, saving the need of calling a physician and all expenses for medicines, as it teaches Hygiene and the use of Nature's remedies, not a drug treatment.

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are considered, and there is not a curable disease that has not been helped by some of the "New Methods" given here; even those who have been pronounced Consumptive have been entirely cured. While for Rheumatism, Indigestion, Dyspepsia, Constipation, Dysentery, Liver and Kidney Troubles, Catarrh, Emaciation, General Debility, Nervous Exhaustion, Diseases Peculiar to Women, etc., the methods are sure, and can be carried out at one's own home and with little or no expense.

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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Ill., May 6.—There is very little honey coming to the market, and fine lots of white comb bring 13c. Yet only a little is taken by the dealers, the season for it being over with the coming of strawberries, which are now plentiful. Extracted brings about late quotations, with beeswax in active demand at 27@28c. for best grades.

San Francisco, Calif., May 6.—White comb, 9-10c.; amber, 5-7c. Extracted, white, 54c.; light amber, 34-4c.; dark tulle, 24c. Beeswax, fair to choice, 25-27c.

New York, N. Y., May 8.—Market quiet at present at unchanged prices. Old crop well cleaned up. Will have new crop within the next week, both comb and extracted, from the south. We expect a fairly good summer trade at fair prices.

Beeswax is weak at 26c.

Detroit, Mich., May 1.—Fancy white comb, 11@12c.; No. 1, 10@11c.; fancy amber, 9@10c.; No. 1, 8@9c.; dark, 7@8c. Extracted, white, 5@6c.; amber, 4@5c.; dark, 4c. Beeswax, 25@26c. Demand is slow for honey, and plenty in commission house.

Kansas City, Mo., May 14.—No. 1 white, 12@13c.; fancy amber, 11@12c.; No. 1, 10@11c.; fancy dark, 9@10c.; No. 1, 7@8c. Extracted, white, 44@5c.; amber, 4@44c.; dark, 34@4c. Beeswax, 25c.

Cincinnati, Ohio, May 7.—Demand is slow for all kinds of honey. Comb honey, 9@14c. for fair to choice white; extracted, 34@6c. There is a fair demand for beeswax at 22@25c. for good to choice yellow.

Minneapolis, Minn., May 1.—Fancy white, 11@12c.; No. 1 white, 10@11c.; fancy amber, 9@10c.; No. 1 amber, 8@9c.; fancy dark, 7@8c.; No. 1 dark, 6-7c. Extracted, white, 6@7c.; amber, 5@54c.; dark, 4@5c. Utah white extracted, 5@54c. Beeswax, 23@26c. Market fairly steady for comb and better for extracted than for some time.

Philadelphia, Pa., May 1.—Fancy white comb, 12-13c.; fancy amber, 8-9c.; No. 1, 8c.; fancy dark, 7-8c. Extracted, white, 5-7c.; amber, 4-5c.; dark, 34-4c. Beeswax, 25c. Season is getting over for comb honey—very little demand. Extracted in good demand.

St. Louis, Mo., May 1.—Fancy comb, 12@13c.; No. 1 white, 11@114c.; amber, 9@104c.; dark, 7@84c. Extracted, white, in cans, 6@7c.; amber, in barrels, 4@44c.; extra, 5c.; dark, 3@4c. Good demand for barrel stock—comb slow sale. Beeswax, 23@234c.—prime finds ready sale at 234c.

Albany, N. Y., May 1.—Fancy white, 12-13c.; No. 1, 11-12c.; fancy amber, 9-10c.; No. 1, 8-9c.; fancy dark, 7-8c.; No. 1, 6-7c. Extracted, white, 5-6c.; dark, 34-4c. Demand is all that could be expected at this season. Stock on hand small.

Indianapolis, Ind., May 1.—Fancy white, 14-15c.; No. 1 white, 12-13c. Extracted, white, 6-7c. Beeswax, 22-25c. Demand is fair for grades quoted, but no demand for inferior grades.

Buffalo, N. Y., May 7.—Strictly fancy comb, 1-pound, mostly 10 and 11c. today. Demand is only fair at present. Other grades range from 5@9c. Extracted, 4@5c.

Boston, Mass., May 1.—Fancy white, 13-14c.; No. 1, 11-12c. Extracted, white, 6-7c.; amber, 5-6c. Beeswax, 25c.

Cleveland, Ohio, Feb. 20.—Fancy white, 144@15c.; No. 1 white, 124@13c. Extracted, white, 6@7c.; amber, 44@54c. Beeswax, 22@25c.

There is not very much honey in our market. Selling rather slow. Demand beginning to be a little better. Think trade will be fair in this line this fall.

A. P. A. may, or B. O. K.

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Most of whom Quote in this Journal.

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WILLIAMS BROS., 80 & 82 Broadway.

St. Louis, Mo.

WESTCOTT COM. CO., 213 Market St

Minneapolis, Minn.

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Boston, Mass.

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Detroit, Mich.

M. H. HUNT, Bell Branch, Wayne Co., Mich.

Indianapolis, Ind.

WALTER S. POWDER, 162 Mass. chusetts Ave

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Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

What About the New Drawn Foundation for Section Honey?

Query 49.—Is it advisable to use in sections foundation with side-walls 1/4 or 3/8 inch high?—Mo.

Wm. McEvoy—No.

Jas. A. Stone—No.

R. L. Taylor—Query.

E. France—I think so.

J. A. Green—I think not.

P. H. Elwood—Yes, if not too heavy and costly.

W. G. Larrabee—If it does not make more "fishbone," yes.

A. F. Brown—I could not say, having had no experience with it.

Prof. A. J. Cook—I have not tried it, but I see no objection if the bees thin it down.

Dr. C. C. Miller—Certainly, if you can have it about the same weight as natural comb, and it doesn't cost too much.

Emerson T. Abbott—Ask the fellow who has time to "split hairs." I have been too busy getting a living to find out.

C. H. Dibbern—Yes, if the honey thus produced is just as nice as if very thin foundation had been used. Try it, and report.

J. E. Pond—The matter of high side-walls is of recent origin, comparatively. If they can be made leaving the septum very thin, I can see no reason why their use will not be advantageous. The only

trouble that I have heard of as yet in the use of foundation in sections is, that it cannot be pressed thin enough to compare with honey where the comb is made entirely by the bees.

Rev. M. Mahlin—I have never used such foundation, nor seen it. I doubt the propriety of using such foundation in sections.

Dr. J. P. H. Brown—I have no experience with 1/4-inch side-wall foundation. It might prove very satisfactory. But until I know this, I will use and be satisfied with foundation of less pretentious side-walls.

Mrs. L. Harrison—We sell our honey in a home market, and use only small starters of foundation in the sections at the top. Our honey has the reputation of tender comb, and we will not risk injuring it by its use in the way mentioned.

G. W. Damaree—It will require careful experimenting along this line before your question is answered in a practical way. I do not think it "advisable" to use anything but very thin starters till a thorough test is made as to the practicability of using deep-cell starters.

G. M. Doolittle—Why not, if it is advisable to use any kind of foundation? There has not been a word said against foundation with side-walls from 3/16 to 1/4 inch high, but what would apply with equal force to any of the foundation now before the public, or that of the past.

Eugene Secor—That will have to be answered by experiment. If foundation with side-walls 3/8 inch high can be manufactured weighing no more per square foot than the thin foundation now in use, and if it can be sold at about the same price, I think it will be found of practical value.

Dr. A. B. Mason—It is not the height of the side-walls that is to be considered, but the thickness, and it is possible that if the side-walls are made as thin by machinery as the bees make them, that it would not be advisable to use it; but the matter can only be settled by trying such foundation.



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